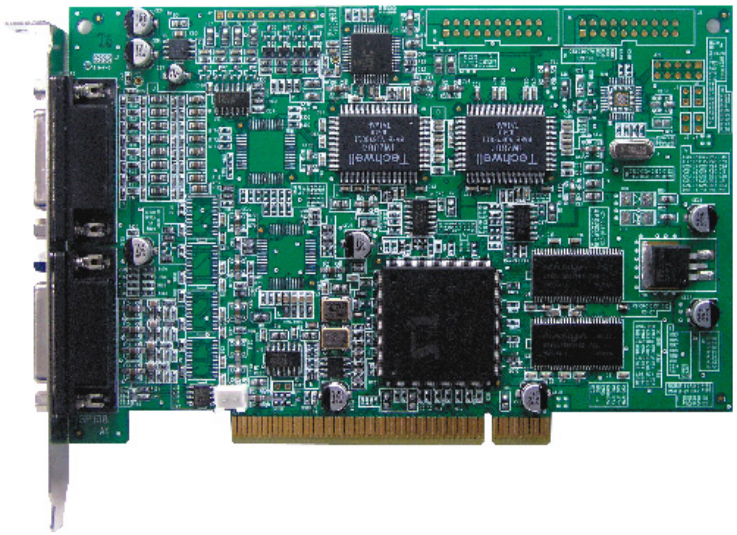
USER'S MANUAL & INSTALLATION GUIDE

ISP-208F

Digital Face and Object Detecter



Part II - Smart Detection Application

About this manual

Before installing and using this unit, please read this manual carefully.

Be sure to keep it handy for later reference.

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14. OBJECT COUNTING

14.1 Brief Overview

Objects are usually basic monitoring targets in video surveillance. Objects can be various kinds of things, such as walking people, moving vehicles, cats and dogs, etc. The object counting function can automatically count the amount of objects pass though a user-defined line by video. There are two counters for both directions of object moving tracks. According to the characteristic of interested objects, we offer two types of options, traffic or human, for optimal application.

14.2 System Requirement

1. DVR System Requirement
   - CPU: Intel Pentium 4 **2.8GHz** or above
   - Memory: 512MB or above
   - Display Card:

     Color Depth: 32 bits

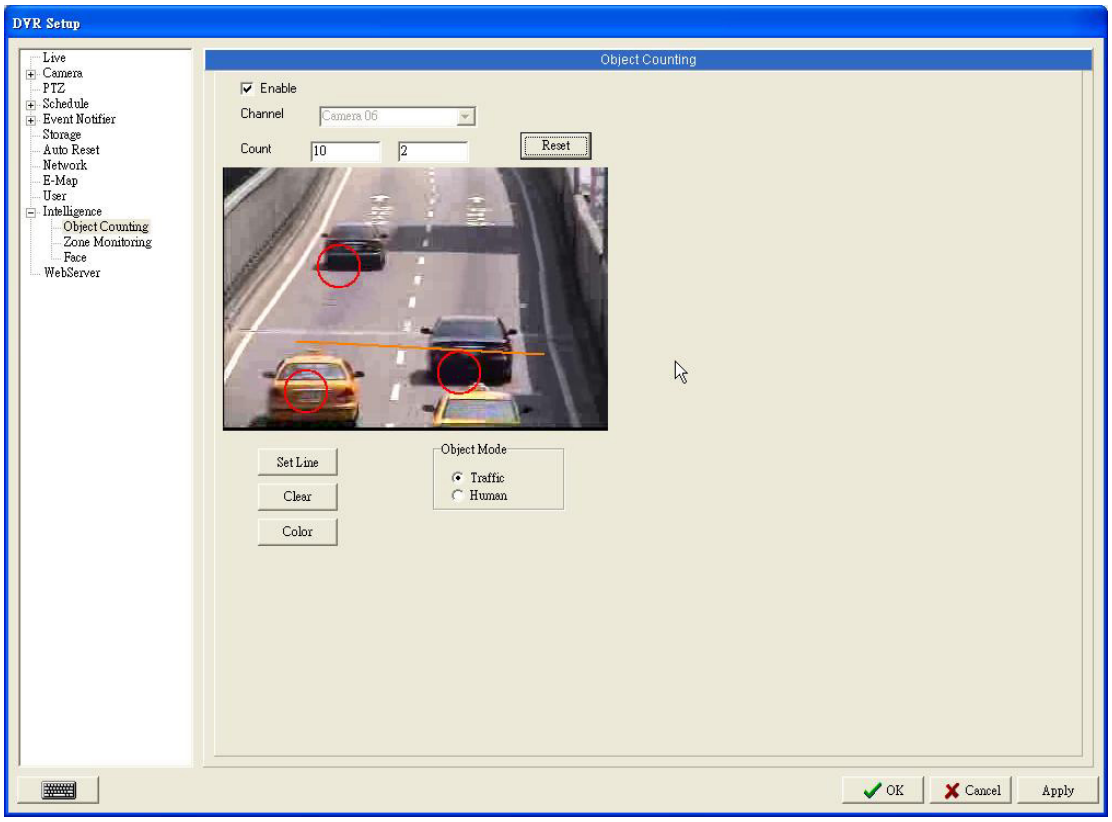
     Resolution: 1024x768

     VRAM Size: 64MB or above

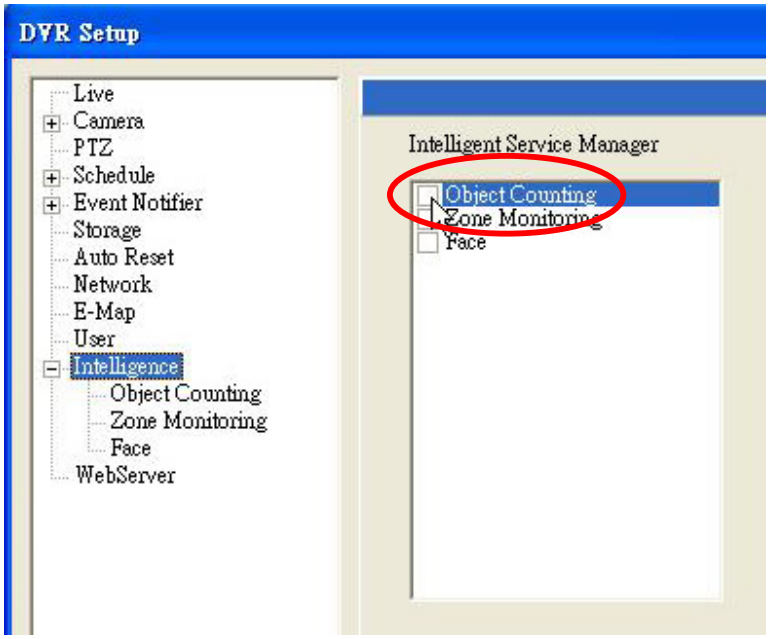
2. Limitations
   - At most 2 cards (16 channels) are allowed to be installed in a machine
   - 4CIF is not allowed for the channel you enable this function

14.3 Setup

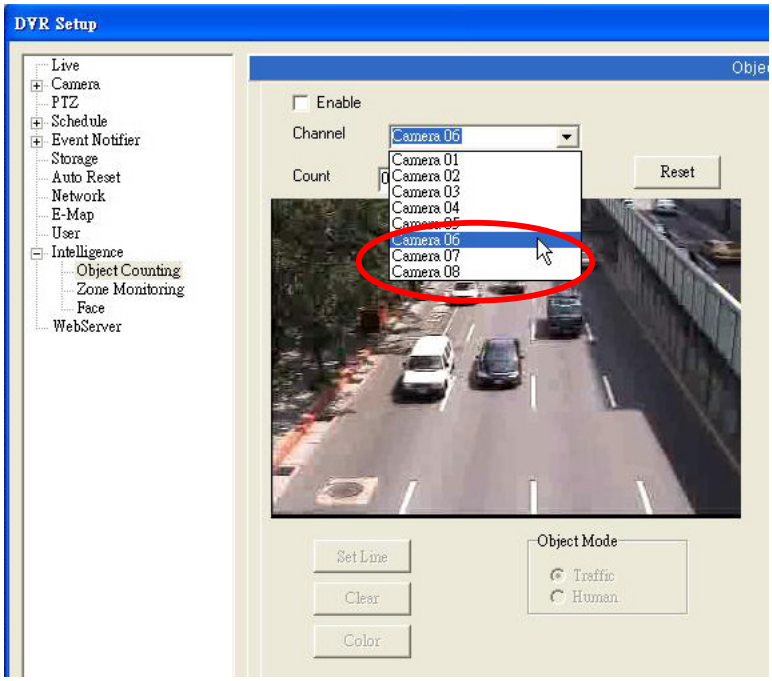
First, click "SETUP" button to enter DVR setup menu.



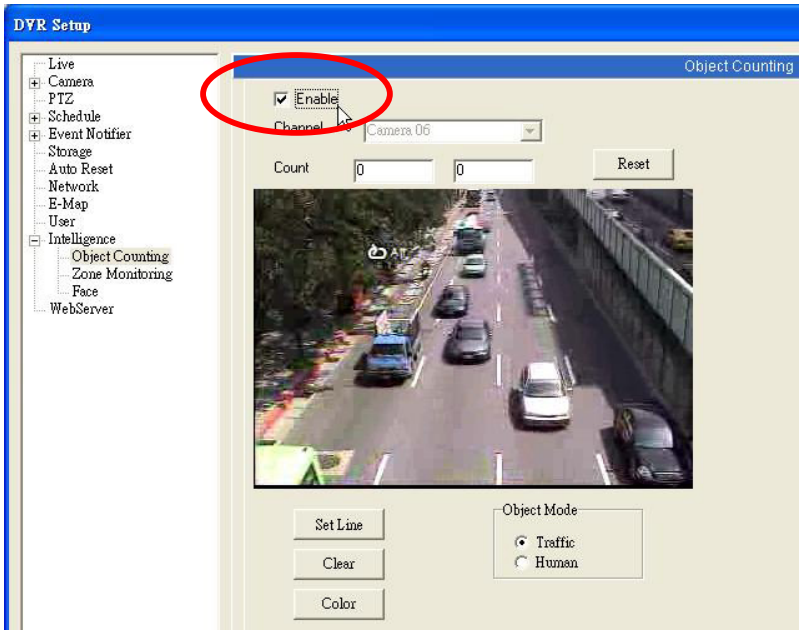
14.3.1 Enable/Disable



Open Object Counting service in the Intelligent Service Manager.



Select the channel that you want to enable object counting function.

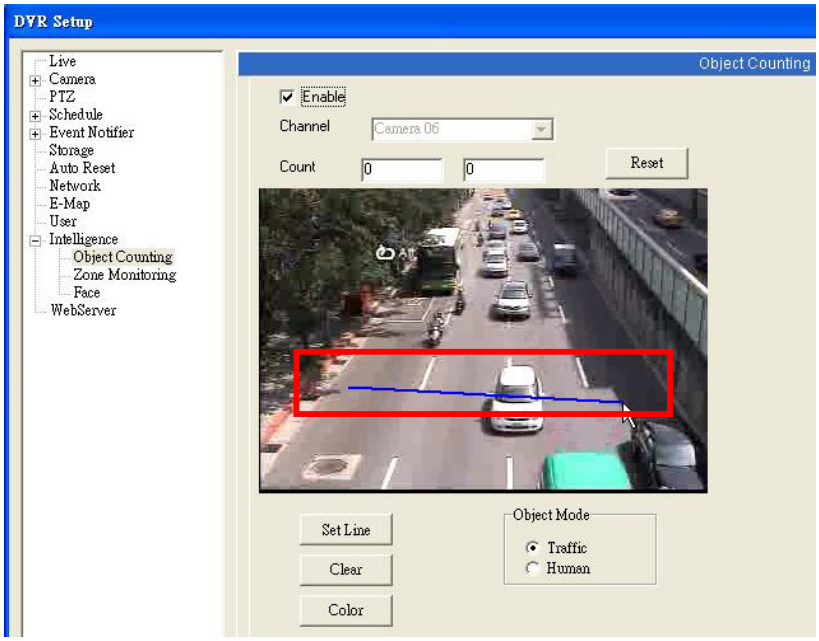


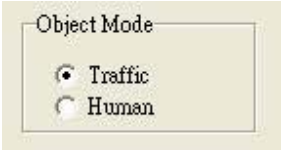
Enable this object counting function.

Click "Set Line" button to set the line that objects will go through.

Click "Clear" button to clear the line and then you can re-draw the line.

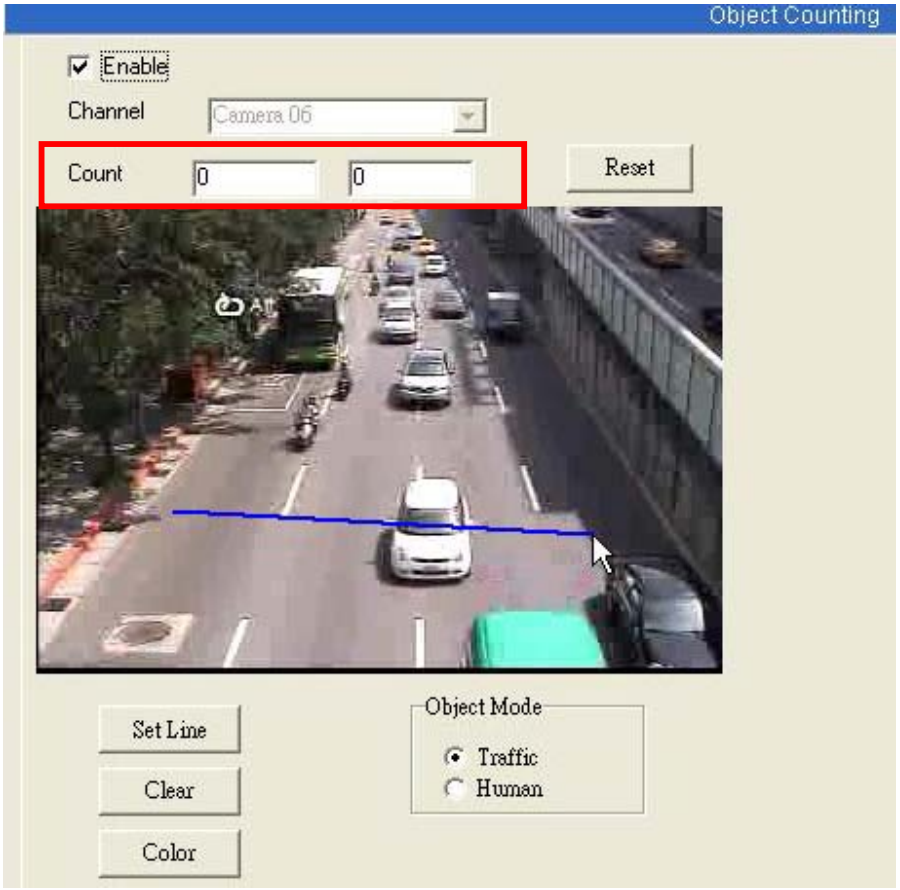
Click "Color" button to set the color of the line showed on the live display.





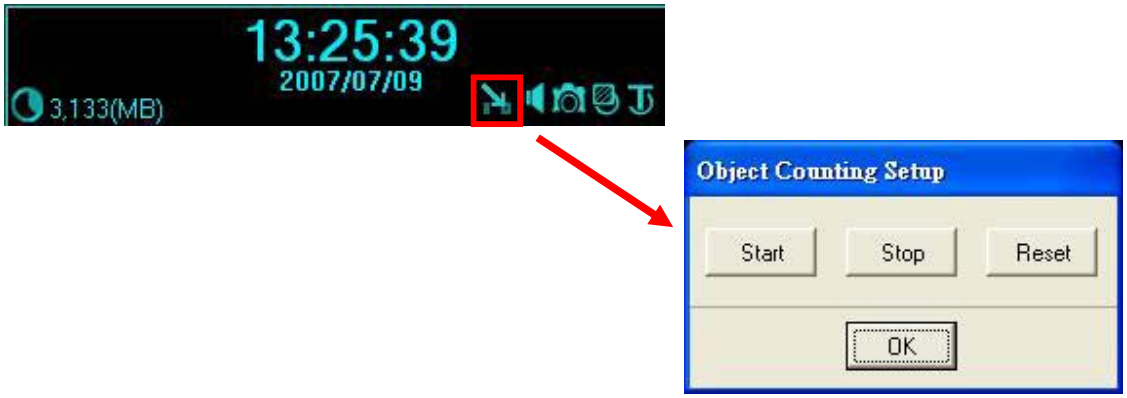
Choose object mode. If the traffic volume counting is applied, choose the radio button "Traffic". If the human (body) counting is applied, choose the radio button "Human" for optimal performance.

Click "Apply" or "OK" to activate counting function.



You can see two increasing numbers in the "Count" field. Those mean the results of both directions for the user-defined line.

Both numbers are showed on the live display also.

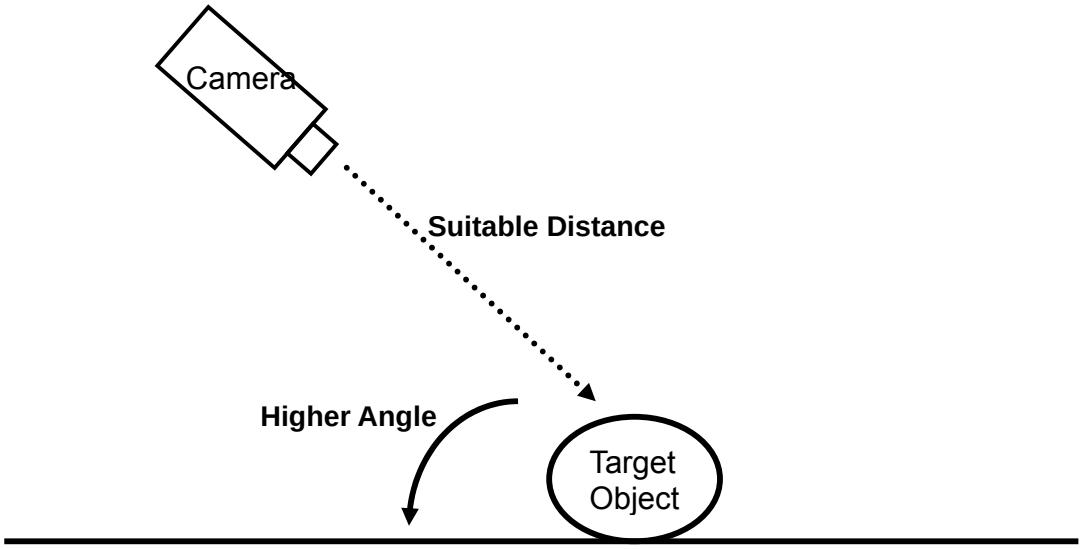


If you want to manually start, stop, or reset the counting anytime, click object counting setup icon on the bottom-right side of the front panel for operation.

14.3.2 Camera Setup Issue

In order to get the optimal performance, there are some precautions for camera installation.

1. **Higher Angle** – Adjust the shooting angle of the camera to the bird's eye view.
2. **Suitable Distance** – The distance between camera and target objects must be suitable. For general cases, the suitable distance is long enough. If the long-enough distance is not allowed in the applied environment, a wide-angle lens mounted camera is required.



15. ZONE MONITORING

15.1 Brief Overview

Sometimes we need to draw a restricted region by the video, monitor whether there are any objects, such as people, animals, and suspicious moving objects, to enter or leave the region. The Zone Monitoring function is what you need. You may draw at most 4 separated rectangle zones for monitoring. Once some objects enter the zones the event "Object Enter" will be issued for further processing; some objects leave the zones the event "Object Leave" will be issued too. Both events will be logged for later search.

15.2 System Requirement

1. DVR System Requirement
   - CPU: Intel Pentium 4 **2.8GHz** or above
   - Memory: 512MB or above
   - Display Card:

     Color Depth: 32 bits

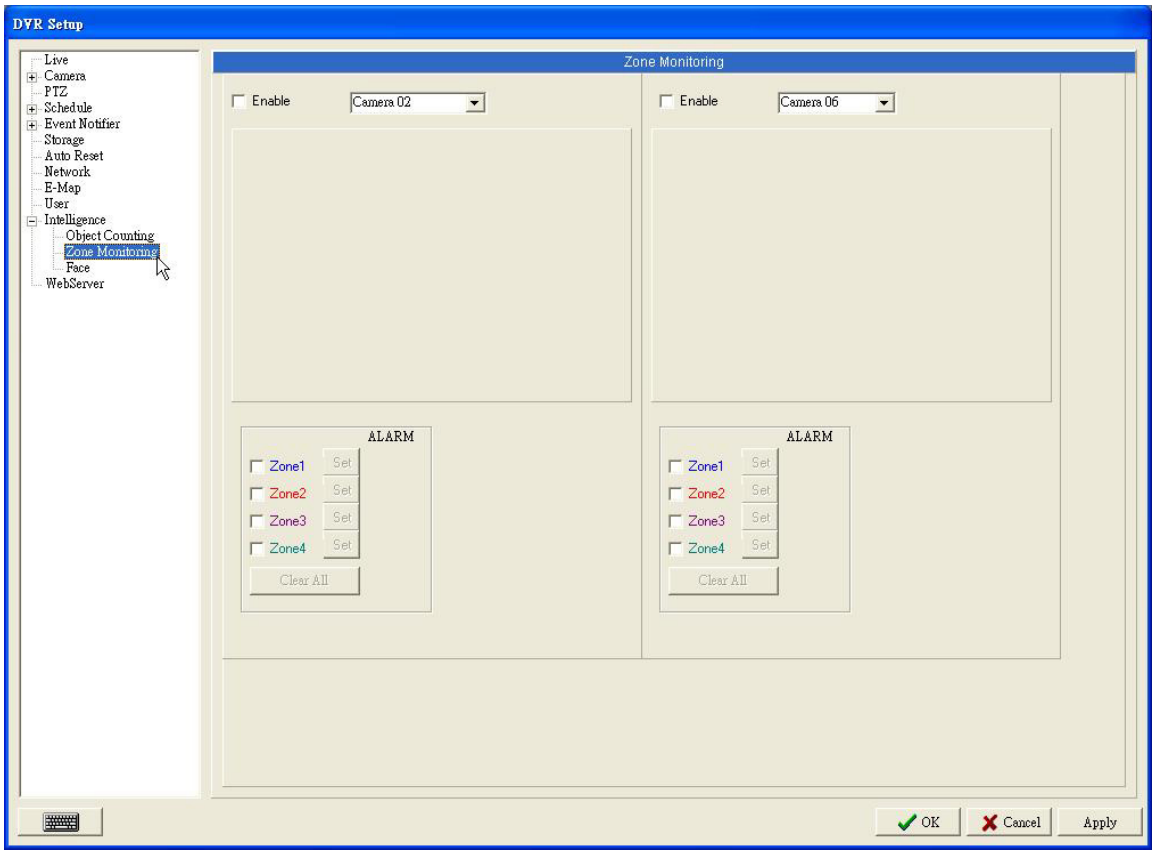
     Resolution: 1024x768

     VRAM Size: 64MB or above

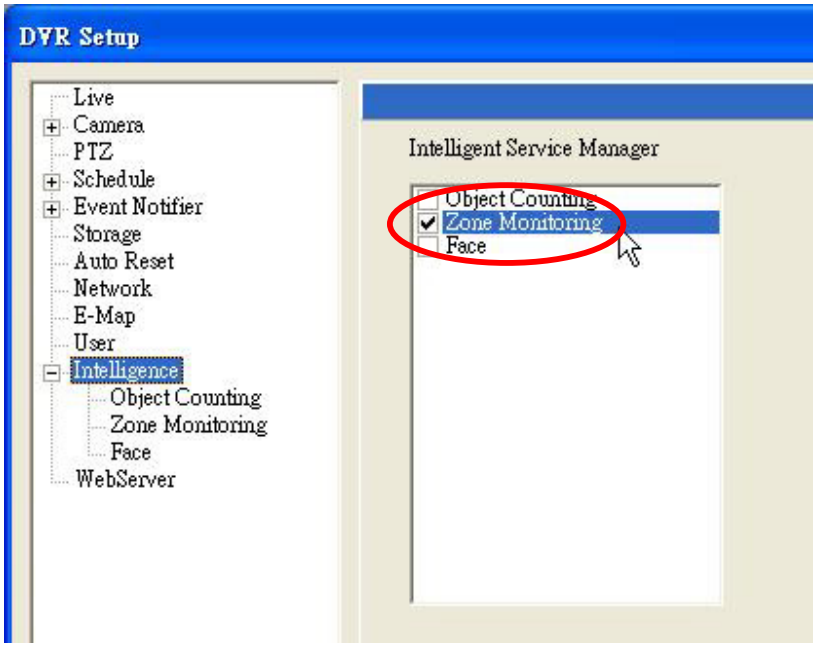
2. Limitations
   - At most 2 cards (16 channels) are allowed to be installed in a machine
   - 4CIF is not allowed for the channel you enable this function

15.3 Setup

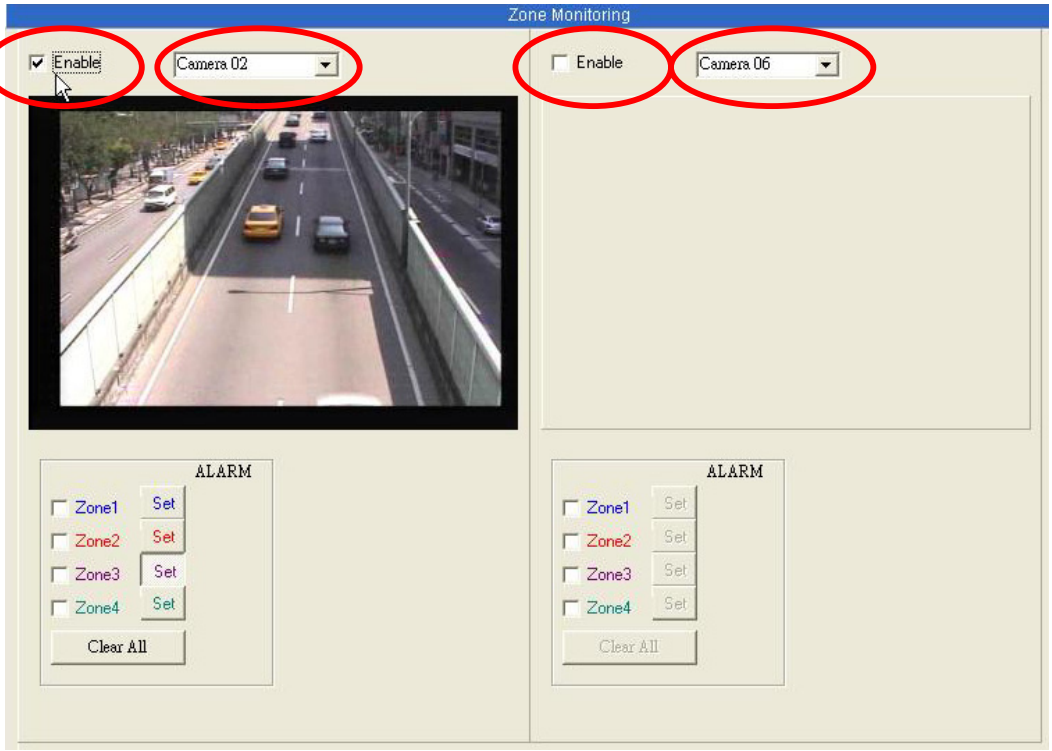
First, click "SETUP" button to enter DVR setup menu.



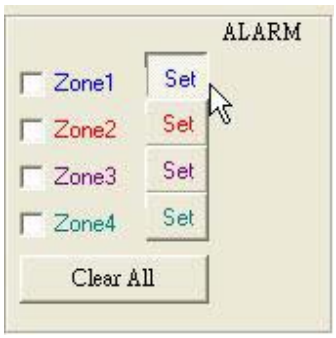
15.3.1 Enable/Disable

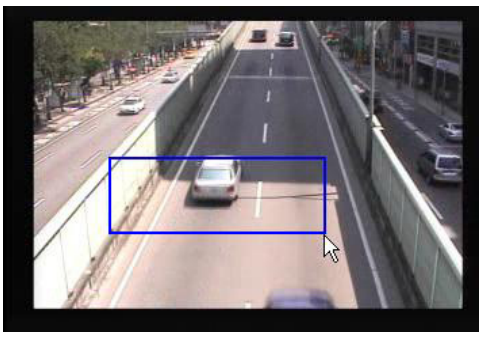


Open Zone Monitoring service in the Intelligent Service Manager.

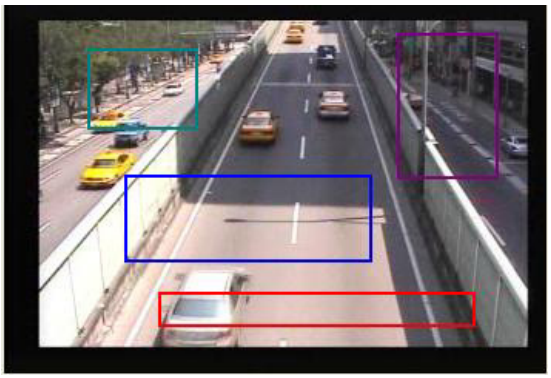


Select the channel you want to apply zone monitoring, and then enable the function. Two channels can be supported simultaneously, but cannot be set to the same camera.





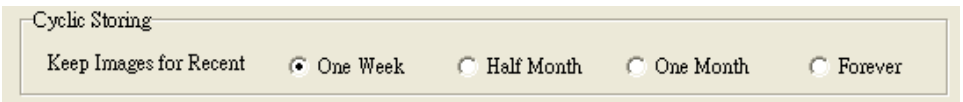
Click the "Set" button and drag a rectangle on the sample video by mouse pointer. The first restricted zone is ready.



You can set at most four restricted zones per channel.

Click the "Clear All" button to clear all rectangles.

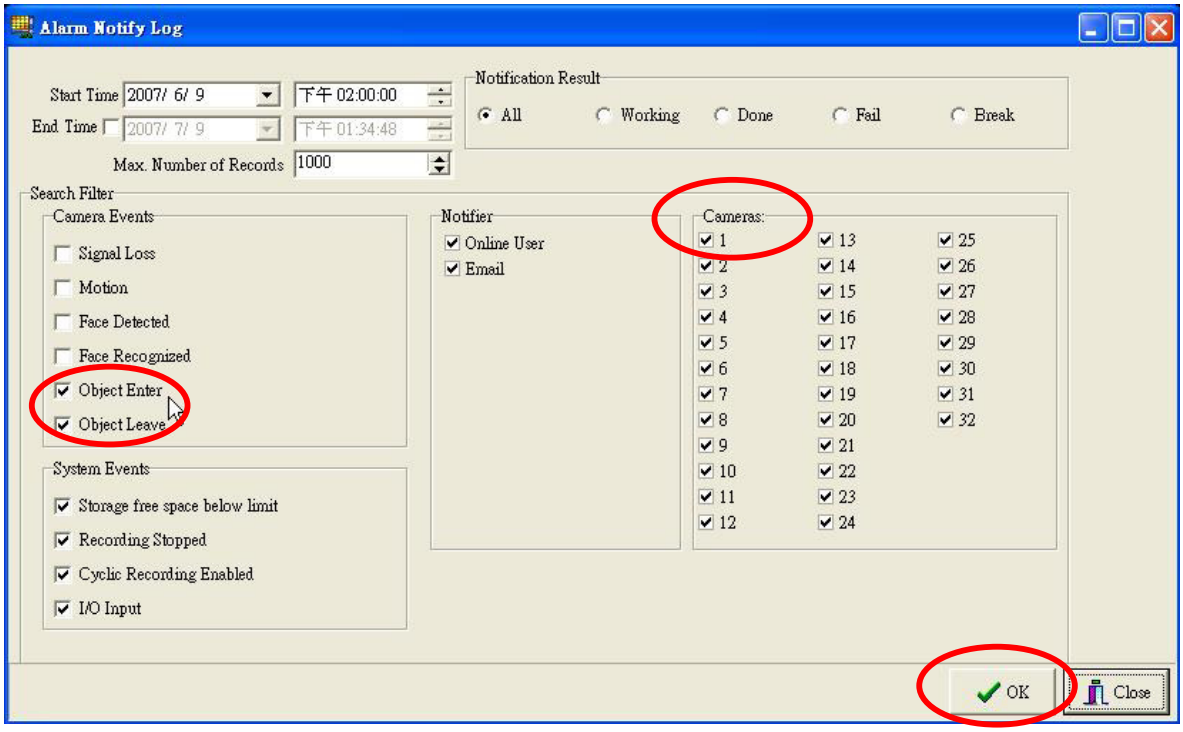
Zone monitoring offers a useful supplementary function called "Zone Monitoring Browser". The snapshot images which "object entry" and "object leave" events issue will be stored in the disk. If you want to enable this function please check the option "Store Image".



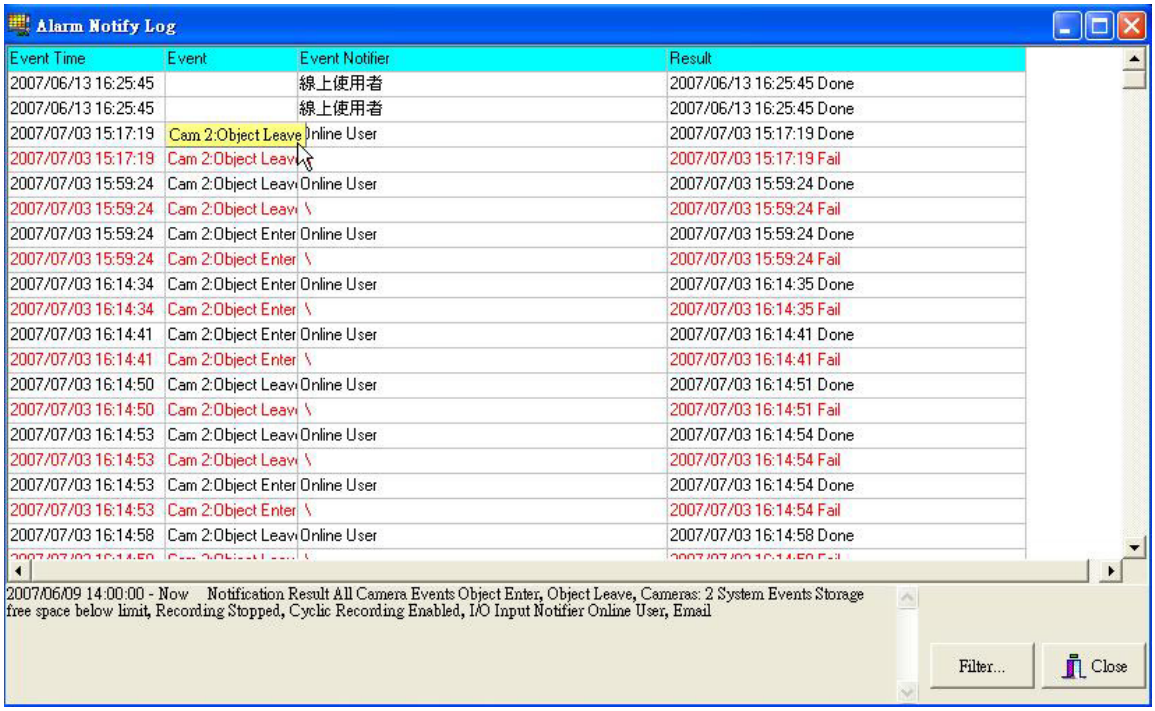
The snapshot images will be preserved for a certain amount of time. Choose to keep the images for recent one week, half month, one month, or forever. If you choose to forever keep the images, you should be responsible for the problem caused by disk full.

Click "Apply" or "OK" to activate the monitoring function.

If you want to search the issued events of zone monitoring, click the "LOG" button to open Alarm Notify Log.



Set the time range. Have the "Object Enter" and "Object Leave" checked. Choose the interested cameras and click "OK" to start searching.

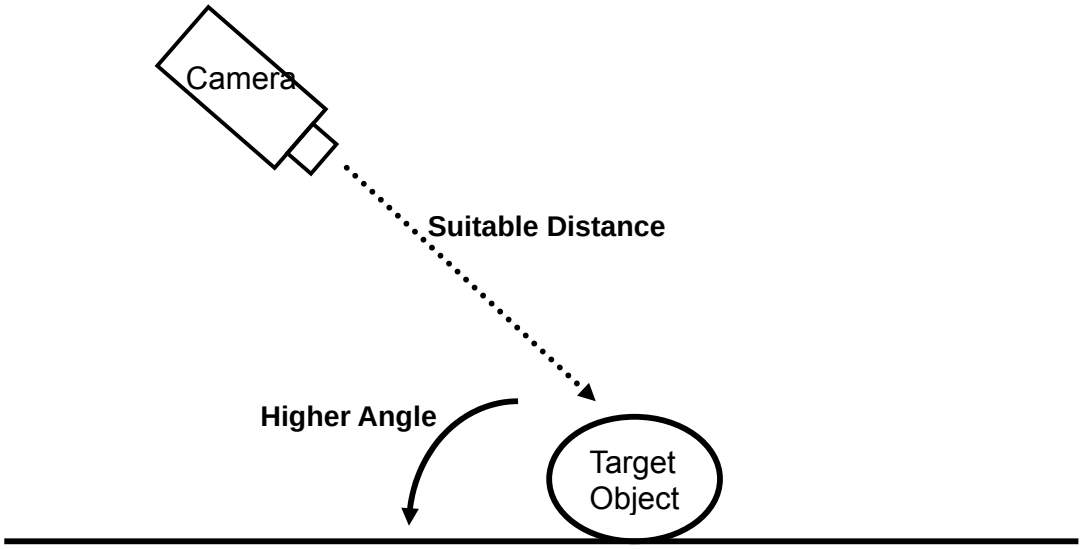

Alarm Notify Log
Event Time
Event
Event Notifier
Result
2007/06/13 16:25:45 線上使用者 2007/06/13 16:25:45 Done
2007/06/13 16:25:45 線上使用者 2007/06/13 16:25:45 Done
2007/07/03 15:17:19 Cam 2:Object Leave Online User 2007/07/03 15:17:19 Done
2007/07/03 15:17:19 Cam 2:Object Leave \ 2007/07/03 15:17:19 Fail
2007/07/03 15:59:24 Cam 2:Object Leave Online User 2007/07/03 15:59:24 Done
2007/07/03 15:59:24 Cam 2:Object Leave \ 2007/07/03 15:59:24 Fail
2007/07/03 15:59:24 Cam 2:Object Enter Online User 2007/07/03 15:59:24 Done
2007/07/03 15:59:24 Cam 2:Object Enter \ 2007/07/03 15:59:24 Fail
2007/07/03 16:14:34 Cam 2:Object Enter Online User 2007/07/03 16:14:35 Done
2007/07/03 16:14:34 Cam 2:Object Enter \ 2007/07/03 16:14:35 Fail
2007/07/03 16:14:41 Cam 2:Object Enter Online User 2007/07/03 16:14:41 Done
2007/07/03 16:14:41 Cam 2:Object Enter \ 2007/07/03 16:14:41 Fail
2007/07/03 16:14:50 Cam 2:Object Leave Online User 2007/07/03 16:14:51 Done
2007/07/03 16:14:50 Cam 2:Object Leave \ 2007/07/03 16:14:51 Fail
2007/07/03 16:14:53 Cam 2:Object Leave Online User 2007/07/03 16:14:54 Done
2007/07/03 16:14:53 Cam 2:Object Leave \ 2007/07/03 16:14:54 Fail
2007/07/03 16:14:53 Cam 2:Object Enter Online User 2007/07/03 16:14:54 Done
2007/07/03 16:14:53 Cam 2:Object Enter \ 2007/07/03 16:14:54 Fail
2007/07/03 16:14:58 Cam 2:Object Leave Online User 2007/07/03 16:14:58 Done
2007/06/09 14:00:00 - Now Notification Result All Camera Events Object Enter, Object Leave, Cameras: 2 System Events Storage free space below limit, Recording Stopped, Cyclic Recording Enabled, I/O Input Notifier Online User, Email
Filter...
Close

Finally you can get the item list of "Object Enter" and "Object Leave" events. Double-click a single item to playback the recorded video if the video is right in the disk. No activity will occurs if the recorded video does not exist

15.3.2 Camera Setup Issue

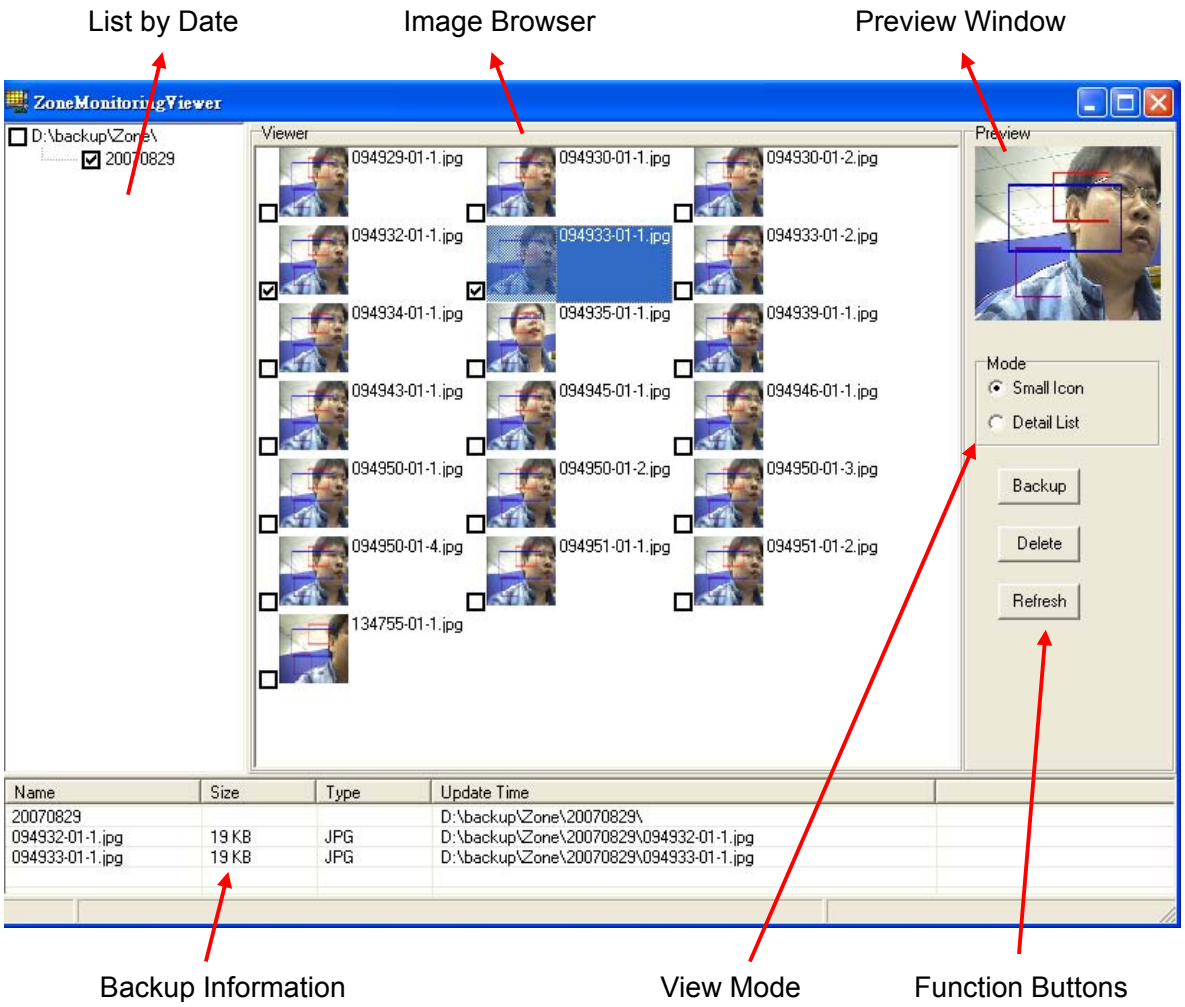
In order to get the optimal performance, there are some precautions for camera installation.

1. **Higher Angle** – Adjust the shooting angle of the camera to the bird's eye view.
2. **Suitable Distance** – The distance between camera and target objects must be suitable. For general cases, the suitable distance is long enough. If the long-enough distance is not allowed in the applied environment, a wide-angle lens mounted camera is required.



15.4 Zone Monitoring Browser

Click the corresponding icon on the front panel to enter the zone monitoring browser.



The snapshot images are stored in the date-format folders. The format of individual file name is "hhmmss-cc-n.jpg". "hhmmss" is the time the image are created. "cc" is the two-digit channel number. "n" is the serial number of the specific second and channel. You can easy know the time and channel of each image was created by the file name.

Choose your preferred display mode by View Mode selection. Click the thumbnail the preview window will display the bigger image. Double-click the thumbnail the corresponding video will be playback in another pop-up window if the video is still in the disk. If the video does not exist in the disk, maybe recording disabled or deleted by cyclic recording, no action will occur.

Function buttons include Backup, Delete, and Refresh. Check the thumbnails and press Backup button for copying them to other place. The bottom area will show the backup information.

Have some thumbnails checked and press Delete button, they will be deleted from the disk. Press Refresh button will reload all images. Because images continue being saved during the execution time of browser, the refresh function will give you the latest result.

16. FACE DETECTION

**** This function is only supported for ISP-208F***

16.1 Brief Overview

Making DVR more Intelligent is the trend in the digital surveillance technology. People want to get more information inside the video. The face detection function is one step to reach the field. After all, men are always the most important targets to be focused.

The faces emerged on the video will be detected and logged if the face detection function is enabled for the specific channel. The lower limit of the face size which can be detected is about 30x30 pixels. The maximum number of simultaneous detected faces will be 18.

Once faces detected, the event will be logged into the system. You can choose to automatically record video for some channels, send email to somebody, or notify the man using the remote client. Moreover, you can search log by face detection event. Then view the recorded video or get the snapshot from the search result. For the live display, the detected faces can be automatically marked out for better viewing.

When the remote client is running, the face events will be immediately received once DVR detects faces. You can choose to automatically display the remote video.

16.2 System Requirement

1. DVR System Requirement
   - CPU: Intel Pentium 4 **2.8GHz** or above
   - Memory: 512MB or above
   - Display Card:

     Color Depth: 32 bits

     Resolution: 1024x768

     VRAM Size: 64MB or above

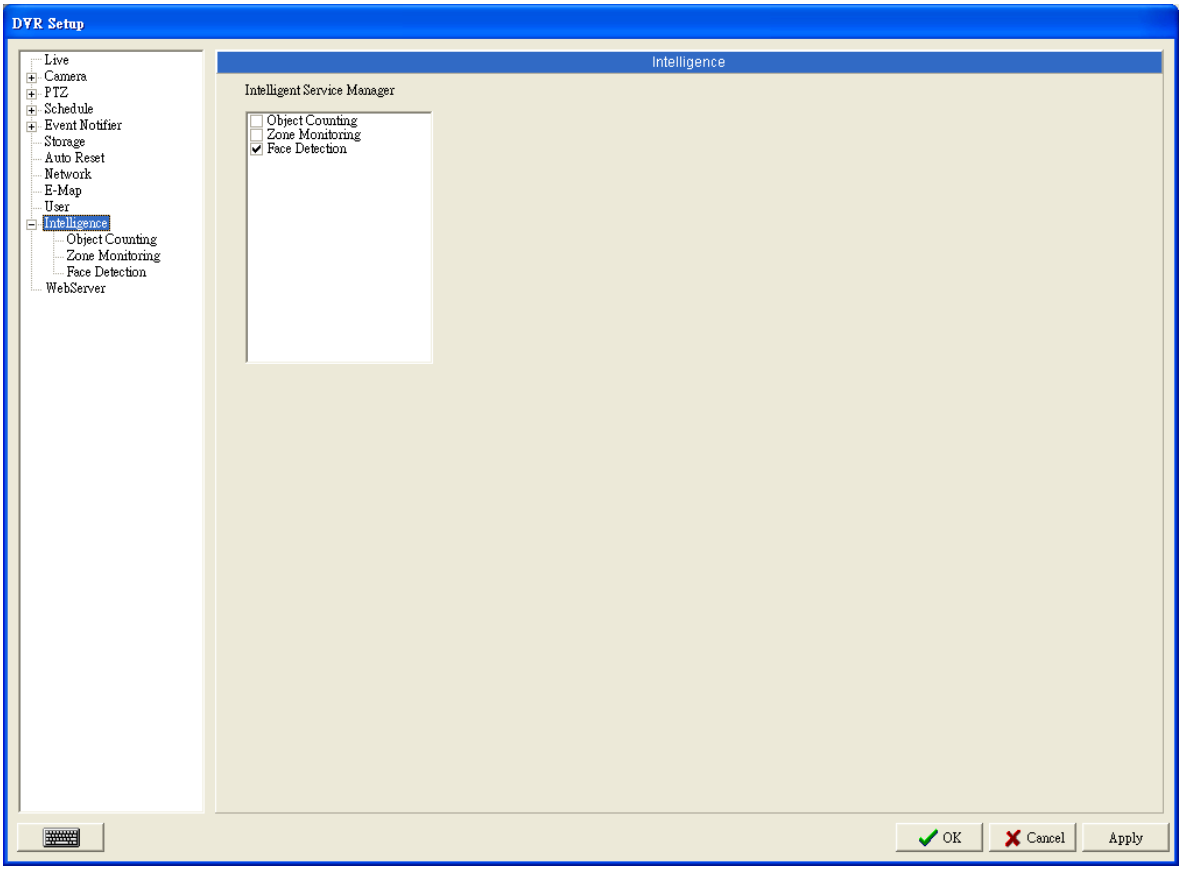
2. Camera Installation Precautions
   - Avoid back lighted
   - Avoid too bright: Adjust the brightness of the video by the camera color function

3. Limitations
   - At most 2 cards (16 channels) are allowed to be installed in a machine
   - 4CIF is not allowed for the channel you enable this function
   - If this function is enabled upon the invalid card the program will automatically close at a random execution time

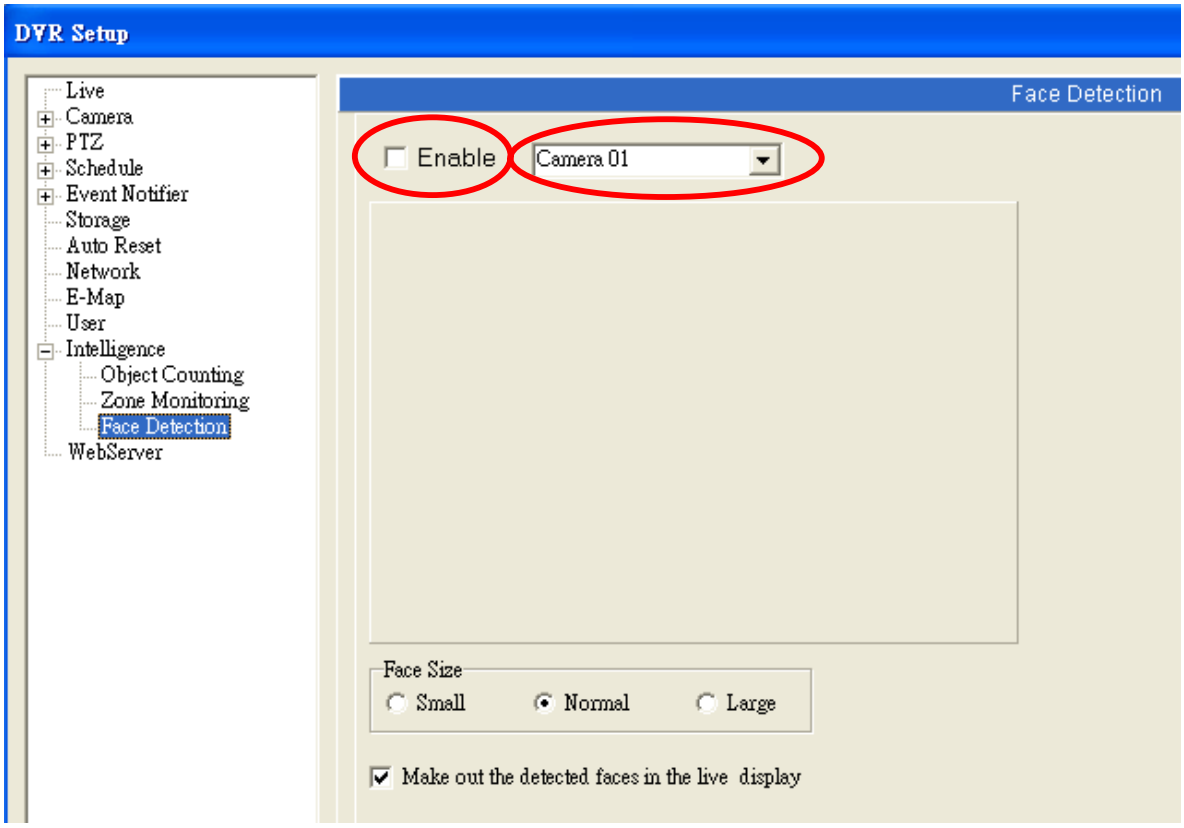
16.3 Setup

First, click "SETUP" button to enter DVR setup menu.

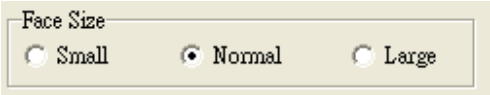
16.3.1 Enable/Disable



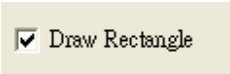
Open Face Detection function in the Intelligent Service Manager.



Select the channel you want to apply face detection function and enable it.



Choose the common size of emerged faces. Adjust this option to get the optimal performance according to applied environment.



Have this checked to show the rectangles around the detected faces in the live display.

Face detection offers a useful supplementary function called "Face Browser". The snapshot images which face detected events issue will be stored in the disk. If you want to enable this function please check the option "Store Image". You can choose to save the pictures of

face only or full frame.

The snapshot images will be preserved for a certain amount of time. Choose to keep the images for recent one week, half month, one month, or forever. If you choose to forever keep the images, you should be responsible for the problem caused by disk full.

Click "Apply" or "OK" to activate Face Detection function.

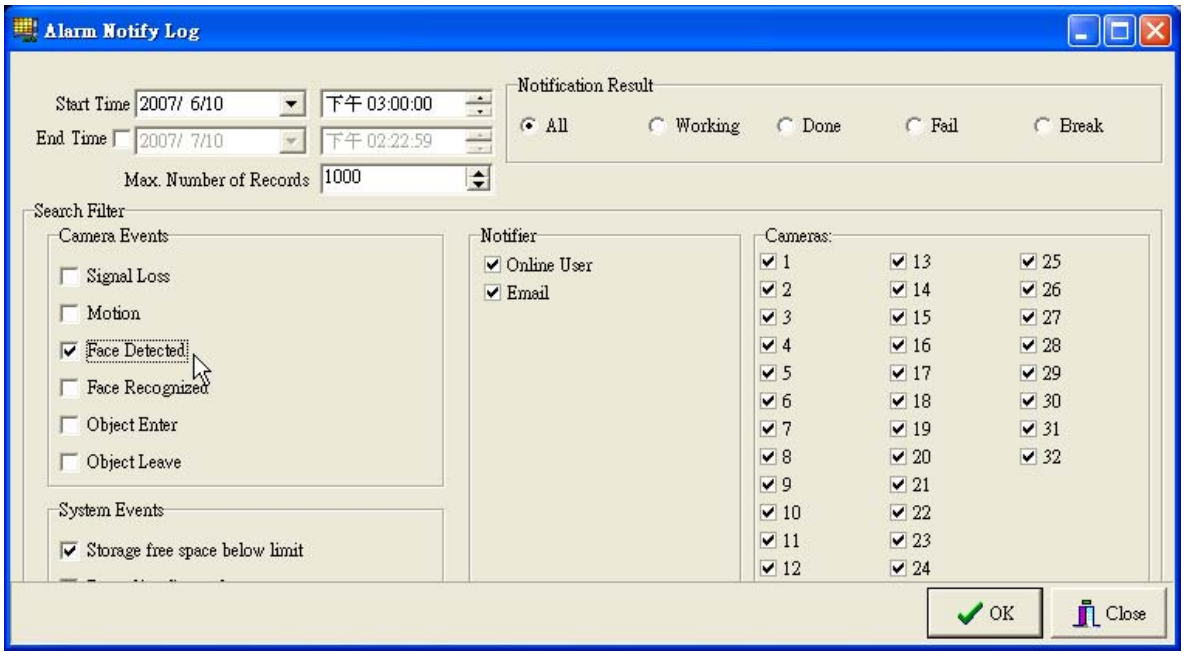
16.4 Search by Face

You can make face detection to be the event for recording schedule. Face detection events can trigger pre-recording or post-recording of one specific channel, or trigger some related channels to start recording.

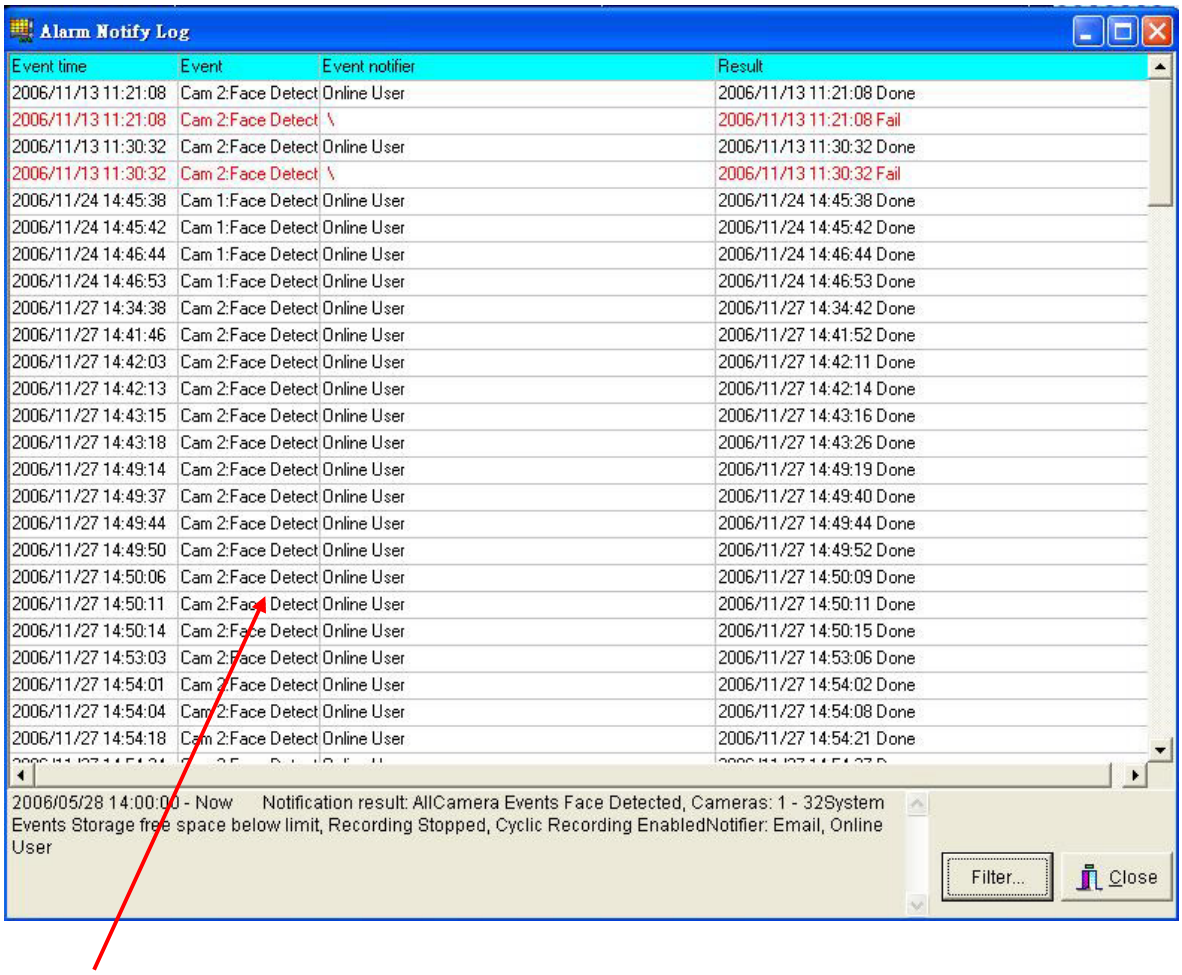
By searching the event log, the events of face detection in the specific channels during the specific time range can be listed. If the recorded video of some event exists in the current storage, you can view the corresponding video and get the snapshot right away.

Click the "LOG" button, the log search dialog will show up.

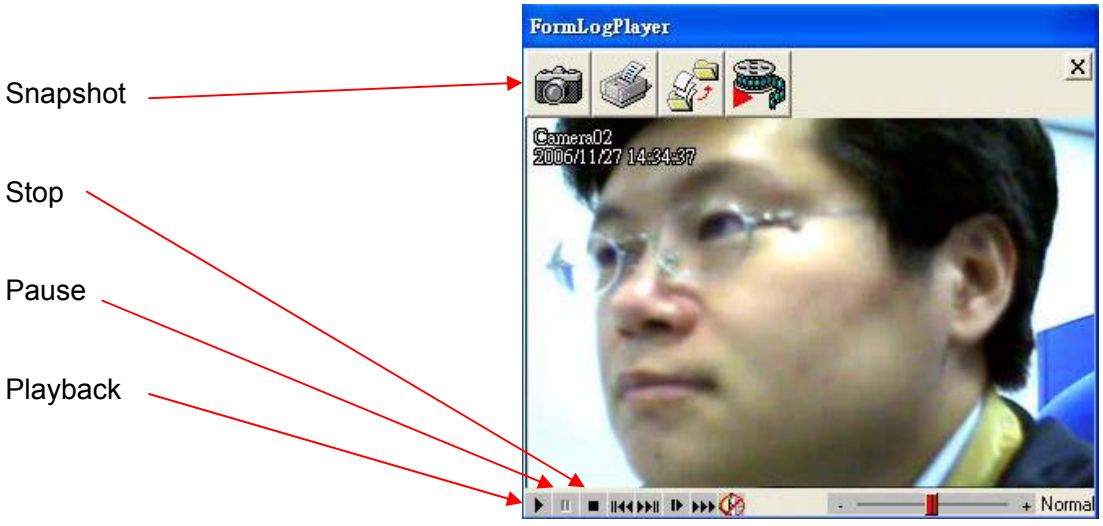
Choose the Face Detected as the search filters. Set the time range, channels, and other options you are interested in. Press "OK" button to search and wait for the result shown.



The search results look like the below chart.

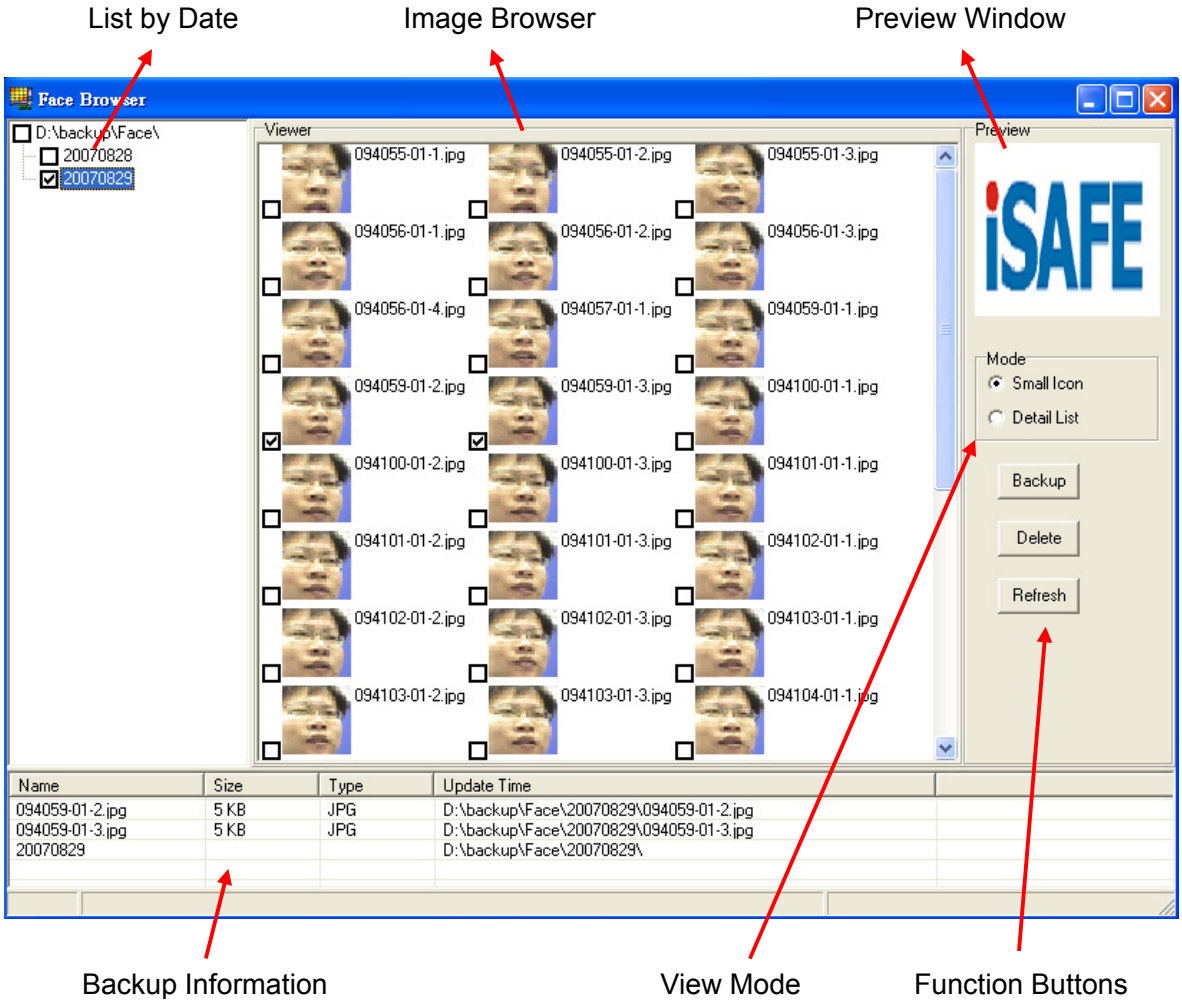

Alarm Notify Log
Event time
Event
Event notifier
Result
2006/11/13 11:21:08 Cam 2:Face Detect Online User 2006/11/13 11:21:08 Done
2006/11/13 11:21:08 Cam 2:Face Detect \ 2006/11/13 11:21:08 Fail
2006/11/13 11:30:32 Cam 2:Face Detect Online User 2006/11/13 11:30:32 Done
2006/11/13 11:30:32 Cam 2:Face Detect \ 2006/11/13 11:30:32 Fail
2006/11/24 14:45:38 Cam 1:Face Detect Online User 2006/11/24 14:45:38 Done
2006/11/24 14:45:42 Cam 1:Face Detect Online User 2006/11/24 14:45:42 Done
2006/11/24 14:46:44 Cam 1:Face Detect Online User 2006/11/24 14:46:44 Done
2006/11/24 14:46:53 Cam 1:Face Detect Online User 2006/11/24 14:46:53 Done
2006/11/27 14:34:38 Cam 2:Face Detect Online User 2006/11/27 14:34:42 Done
2006/11/27 14:41:46 Cam 2:Face Detect Online User 2006/11/27 14:41:52 Done
2006/11/27 14:42:03 Cam 2:Face Detect Online User 2006/11/27 14:42:11 Done
2006/11/27 14:42:13 Cam 2:Face Detect Online User 2006/11/27 14:42:14 Done
2006/11/27 14:43:15 Cam 2:Face Detect Online User 2006/11/27 14:43:16 Done
2006/11/27 14:43:18 Cam 2:Face Detect Online User 2006/11/27 14:43:26 Done
2006/11/27 14:49:14 Cam 2:Face Detect Online User 2006/11/27 14:49:19 Done
2006/11/27 14:49:37 Cam 2:Face Detect Online User 2006/11/27 14:49:40 Done
2006/11/27 14:49:44 Cam 2:Face Detect Online User 2006/11/27 14:49:44 Done
2006/11/27 14:49:50 Cam 2:Face Detect Online User 2006/11/27 14:49:52 Done
2006/11/27 14:50:06 Cam 2:Face Detect Online User 2006/11/27 14:50:09 Done
2006/11/27 14:50:11 Cam 2:Face Detect Online User 2006/11/27 14:50:11 Done
2006/11/27 14:50:14 Cam 2:Face Detect Online User 2006/11/27 14:50:15 Done
2006/11/27 14:53:03 Cam 2:Face Detect Online User 2006/11/27 14:53:06 Done
2006/11/27 14:54:01 Cam 2:Face Detect Online User 2006/11/27 14:54:02 Done
2006/11/27 14:54:04 Cam 2:Face Detect Online User 2006/11/27 14:54:08 Done
2006/11/27 14:54:18 Cam 2:Face Detect Online User 2006/11/27 14:54:21 Done
2006/05/28 14:00:00 - Now Notification result: AllCamera Events Face Detected, Cameras: 1 - 32System Events Storage free space below limit, Recording Stopped, Cyclic Recording EnabledNotifier: Email, Online User
Filter...
Close

Double-click any item of search result, the corresponding recorded video will show up if the video exists in the storage. No activity will occur if the recorded video does not exist.



16.5 Face Browser

Click the corresponding icon on the front panel to enter the face browser.



The snapshot images are stored in the date-format folders. The format of individual file name is "hhmmss-cc-n.jpg". "hhmmss" is the time the image are created. "cc" is the two-digit channel number. "n" is the serial number of the specific second and channel. You can easy know the time and channel of each image was created by the file name.

Choose your preferred display mode by View Mode selection. Click the thumbnail the preview window will display the bigger image. Double-click the thumbnail the corresponding video will be playback in another pop-up window if the video is still in the disk. If the video does not exist in the disk, maybe recording disabled or deleted by cyclic recording, no

action will occur.

Function buttons include Backup, Delete, and Refresh. Check the thumbnails and press Backup button for copying them to other place. The bottom area will show the backup information.

Have some thumbnails checked and press Delete button, they will be deleted from the disk. Press Refresh button will reload all images. Because images continue being saved during the execution time of browser, the refresh function will give you the latest result.